

REMARKS

Claim 2 has been amended to be in independent form and replace claim 1 as the broadest independent claim. Claims dependent on claim 1 have been amended to depend on claim 2. Claim 20 and the claims which depend thereon have been canceled. Claims 2-5, 9, 10, 12, 14-18, 25, 27, 29, 30, 34-37, 39, 40, 42, 45-49 are now pending in this application. The language "carbon based moiety" does not appear in any of these claims. The rejections under 35 USC §112, first paragraph, for allegedly not satisfying the written description requirement and for not being enabled by the disclosure are now moot.

There is clearly written description for the aryl ureas claimed in independent claims 2 and 34-37 as well as the claims which depend thereon. These claims define diaryl ureas with prescribed structures bound directly to the urea group and prescribed substituents bound to these structures. One skilled in the art would recognize the compounds which are "C₁-C₁₂ cycloalkyl, with 0-3 heteroatoms." These structures are unsaturated ring systems which can have as many as 15 members (12 carbons and 3 heteroatoms) and as few as 3 members, the minimum necessary to form a cyclic structure. The members of the ring structure are clearly defined as carbon, nitrogen, sulfur and oxygen. The examiner has not identified any ambiguity in the language used.

The term "C₃-C₁₂ heteroaryl groups having 1-3 heteroatoms," also clearly defines ring structures comprising carbon, nitrogen, sulfur and oxygen of a specific size (4-15 members).

The term "C₇-C₂₄ alkaryl" defines aromatic ring structures substituted by alkyl groups. These structures comprise carbon and have at least one six membered aryl ring structure with an alkyl substituent. The size and number of aryl groups and alkyl groups is limited to 24 carbon atoms.

Other terms such as "5-7 membered heterocyclic structure of 1-3 heteroatom selected from oxygen, sulfur and nitrogen," are also clear in scope.

Not only are the definitions used clear in meaning, one skilled in the art is provided with additional guidance when considering the preferred embodiments of certain groups defined by these phrases, (e.g. alkyl, alkoxy, cycloalkyl, heterocyclic, alkenyl, alkenoyl, aryl, hetaryl, aralkyl and alkaryl). One skilled in the art would clearly recognize the chemical

bonds and configurations for the atoms within these moieties are conventional and well known in the art.

Therefore, when considering the disclosure as a whole, one skilled in the art could determine which aryl ureas fall within the scope of this invention and they would recognize that applicants had possession of the full scope of aryl ureas defined by this language.

The examiner alleges it is not clear where these groups are attached. Applicants do not intend to limit the points of attachment for these groups and so it is not necessary to specify the points of attachment in defining the ring structures intended. Specifying particular ring structures such as phenyl, pyridyl and pyrimidinyl does not provide any limit as to the point of attachment of the structures defined.

The enablement requirement is satisfied if, given what those of ordinary skill in the art already know, the specification teaches those in the art enough that they can make and use the claimed invention without undue experimentation. See *Amgen v Hoechst Marion Roussel*, 314 F.2d 1313, 65 USPQ2d 1385 (Fed. Cir. 2003). The specification clearly provides an enabling disclosure for the aryl ureas claimed, the pharmaceutical compositions that contain them and the treatment methods that use them. No evidence has been presented to the contrary such that this rejection should be withdrawn.

The specification provides ample guidance as to how to prepare pharmaceutical compositions with the compounds of this invention and how to administer these compositions in the treatment of cancers. The specification also provides dosage ranges for the various methods of administration. Given the extent of the disclosure provided, it would at most involve routine experimentation if any at all, for one of ordinary skill in the art to make and use a compound of this invention.

The compounds claimed do have common elements which are characteristic of a "lock and key" arrangement in requiring a urea group substituted by specific ring structures, one of these ring structures requiring a substituent selected from a limited group consisting of -SO₂R_x, -C(O)R_x and -C(NR_y)R_z. The compounds illustrated in the examples show that raf kinase inhibition is retained with compounds having this basic structure with significant

variation in two of the broadly defined moieties, R_a and R_b, contrary to the examiner's allegations. In addition, it is not necessary for each of the compounds claimed to behave in the exactly the same way for to satisfy the enablement requirement of 35 USC § 112. The enabling disclosure provided by the specification is not diminished if the effectiveness and bioavailability of the claimed compounds changes with varying the moieties, R_a and R_b, and substituents.

Citing *In re Fischer*, 427 F.2d 833, 166 USPQ 18 (CCPA 1970), the examiner states that the pharmaceutical art is unpredictable, "requiring each embodiment to be individually assessed for physiological activity." This is inconsistent with current case law and the MPEP.

Explicitly providing dedicated assays for each embodiment is not necessary to enable the methods claimed. See, for example, *In re Howarth*, 654 F.2d 105, 210 U.S.P.Q. 689 (CCPA 1981) ("An inventor need not ... explain every detail since he is speaking to those skilled in the art."); *In re Gay*, 309 F.2d 769, 774, 135 U.S.P.Q. 311 (CCPA 1962) ("Not every last detail is to be described, else patent specifications would turn into production specifications, which they were never intended to be."). In fact, there is no requirement that an applicant provide any working examples relating to the treatments claimed to satisfy the statute. See, for example, *In re Angstadt*, 537 F.2d at 502-03, 190 USPQ 214 (CCPA 1976) (deciding that applicants "are *not* required to disclose *every* species encompassed by their claims even in an unpredictable art"); *Utter v Higara*, 845 F.2d at 998-99, 6 USPQ2d 1714 (Fed. Cir. 1988) (holding that a specification may, within the meaning of Section 112, Para. 1, enable a broadly claimed invention without describing all species that claim encompasses).

The MPEP also agrees by stating that "compliance with the enablement requirement of 35 U.S.C. 112, first paragraph, does not turn on whether an example is disclosed." See MPEP § 2164.02.

The examiner alleges that the claims fail the requirements of the statute by employing generic language at the point of novelty. The generic language within the pending claims has not been shown to be ambiguous or overly broad so as to violate 35 USC § 112. There is no basis for rejecting the claims on broad scope alone such that these rejection should be withdrawn. Furthermore, the rejections do not apply to the pending claims which do not

contain broad generic language such as those which recite a small subgenus of compounds as in claims 34-36(only 9 compounds).

For the reasons indicated above, applicants submit that all pending claims meet the requirements of 35 U.S.C. § 112, first paragraph and that the PTO has failed to meet its burden of establishing that the disclosure does not enable one skilled in the art to make and use the compounds, compositions and methods recited in the claims, such that this rejection should be withdrawn.

Double Patenting

Applicants maintain the claims herein define compounds which are patentably distinct from those claimed in cited copending applications 10/788029, 10/361,858 and 10/848567.

Copending application 10/788029, is directed to compounds which have a cyano group (-CN) bound to moiety L¹ instead of one of the required substituents which appear on the compounds of this invention (-SO₂R_x, -C(O)R_x and -C(NR_y)R_z). The examiner alleges that the cyano group is a precursor to the required substituents which appear on the compounds of this invention and that applicants disclose their equivalency. No evidence has been presented to support these allegations. Furthermore, there is no evidence that the kinase inhibiting activity of the cyano substituted compounds would be expected or predicted. One skilled in the art would not be motivated to replace the substituents which appear on the L¹ moiety with CN or vice versa and therefore, there is no basis for the obviousness type double patenting rejection. Even if the compounds have similar functions, they are structurally distinct.

Copending application 10/361,858 is directed to compounds which require a pyridine nitrogen be oxidized to an n-oxide. Evidence to support this obviousness-type double patenting rejection has yet to be presented.

Copending application 10/848567 primarily contains claims directed to the assessment of patients/candidates for a pharmaceutical. There are some methods of treatment

claims, however, in that this application was filed prior to Copending application 10/848567, the rejection for obviousness type double patenting should be withdrawn if the claims are otherwise allowable consistent with MPEP 804 (I)(B). Relevant portions of MPEP 804 (I)(B) are recited in the submission with the RCE.

Applicants also maintain these rejections are premature and that they are better addressed once allowable subject matter is identified in this application.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,



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